

What Is Claimed:

1. A method for controlling program execution in a distributed computer system comprising the steps of:
 - registering interest in an occurrence of an event in the distributed computer system, the registration of interest including information identifying the occurrence of the event, an identifier of a software entity in the distributed system, and a first object including a process and parameter data corresponding to the process;
 - monitoring at least a portion of the distributed computer system for the occurrence of the registered event;
 - notifying the software entity identified in the registration of interest when the event occurs, the notification including a copy of the first object and an identification of the event that occurred; and
 - executing methods contained within the first object in response to the notifying step.
2. The method of claim 1, wherein the notification step further includes the step of using a generic notify method to notify the software entity.
3. The method of claim 1, wherein the step of registering interest further includes registering interest by a process located in a virtual machine different than the virtual machine in which the software entity is located.

4. The method of claim 1, wherein the step of monitoring the distributed computer system is performed by a process in a virtual machine different than the virtual machine in which the software entity is located.

5 5. A distributed computer system comprising:

a memory containing a first virtual machine;

a memory containing a second virtual machine executing a process that receives, from the first virtual machine, a registration of interest in an event and transmits a message in response to the occurrence of the event, the registration of interest and the message including computer code; and

a memory containing a third virtual machine for receiving the message and executing the computer code; and

processors for running the first virtual machine, the second virtual machine, and the third virtual machine.

15 6. The distributed computer system of claim 5, wherein the message transmitted by the second virtual machine is a generic notify method.

20 7. The distributed computer system of claim 5, wherein the registration of interest by the second virtual machine includes an identification of the event and an identification of the third virtual machine.

8. The distributed computer system of claim 5, wherein each said virtual machine is on a separate computer.

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9. The distributed computer system of claim 5, wherein the computer code is implemented in an object.

10. A protocol for controlling the execution of processes in a distributed computer system, the protocol comprising the steps of:

receiving a registration of interest in an event that is expected to occur in the distributed computer system, the registration including an identifier of a software entity in the distributed system and a first object, the first object including computer instructions for performing a process and parameter data corresponding to the process;

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monitoring the distributed system for the occurrence of the registered event;
notifying the software entity identified in the registration of interest when the event occurs, the notification including a copy of the first object and an identification of the event that occurred.

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11. The protocol of claim 10, wherein the notify step further includes the step of using a generic notify method to notify the software entity.

12. A computer readable medium containing instructions for controlling program execution in a distributed computer system, the instructions causing the distributed computer system to perform the steps of:

5 registering interest in an event in the distributed computer system, the registration of interest including information identifying the event, an identifier of a software entity in the distributed system, and computer code for executing a process;

 monitoring at least a portion of the distributed computer system for the occurrence of the registered event;

 notifying the software entity identified in the registration of interest when the event occurs, the notification including a copy of the computer code and an identification of the event that occurred; and

 executing methods contained within the first object in response to the notifying step.

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13. A computer readable medium containing instructions for implementing a protocol for controlling the execution of processes in a distributed computer system, the instructions causing a computer in the distributed computer system to perform the steps of:

5 receiving a registration of interest in an event in the distributed computer system, the registration including an identifier of a software entity in the distributed system and a first object,

the first object including computer instructions for performing a process and parameter data corresponding to the process;

monitoring the distributed system for the occurrence of the registered event; and

10 notifying the software entity identified in the registration of interest when the event occurs, the notification including a copy of the first object and an identification of the event that occurred.

100-12300-1-001204

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